

photocopy. Care has been taken to avoid the introduction of new matter. Favorable reconsideration of this application is respectfully solicited.

Upon review of the application, spelling errors have been found in the specification at page 12, claim 6 and block 3 of Fig. 1. Correction of these errors have been made to the specification and claim 6. It is proposed that Fig. 1 of the drawings be corrected to provide proper spelling of the word "display" in block 3. In addition, it is proposed that the unlabeled blocks identified by reference numeral 10 in each of Figs. 1 and 5, be labeled "semiconductor device," as described in the specification at pages 5 and 13.

Claims 1 through 3 were rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. patent 6,223,098 (Cheong), as presented at paragraph 2 of the Office Action. In response, independent claim 1 has been amended.

Cheong discloses a control system for a semiconductor integrated circuit test process. As disclosed in the summary of the invention, the control system is directed to improving the efficiency of the test process, reduce test time, accurately analyze test data and stabilize the production lines, bypass the QA sampling test by using test data of the final test, and efficiently control the final test procedure by analyzing test results in real time during the final test. The Office Action has referenced various portions of the specification and drawings for more detailed disclosure of these features. Determination is made as to whether the test yield meets predetermined requirements as to lot size, whether additional testing is to be undertaken, number of good and failed devices, etc. The QA monitoring sequence is based on percentages of various test parameters or

occurrence of predetermined failure thresholds to determine whether different testing is to be performed (column 10, last paragraph).

The present invention, however, is directed to a different objective. The degree of quality assurance is to be determined in accordance with an algorithm that is dependent on the basis of reliability data graded for a per-inspection-item for a substance to be inspected. Reliability is related to information unique to the pieces of inspection apparatus, such as inspection sensitivity and accuracy, as well as information unique to inspection methods, such as the frequency of inspection, inspection conditions, specifications, and an inspection environment. Inspections pertaining to inspection items are thus graded with respect to reliability. See, for example, the third paragraph of page 6 of the specification.

For each inspected item, the general graded data pertaining to the degree of quality assurance is determined and displayed. The quality assurance automatic display system grades inspections in consideration of variations in reliability attributable to a difference between the pieces of inspection apparatus and attributable to a difference between inspection methods. The resultant grade can be provided on the inspected semiconductor device, thereby enabling a user to ascertain the correct degree of quality assurance. Manufacturers of the semiconductor device can set appropriate prices for the semiconductor device in accordance with the correct degree of quality assurance (specification, page 8, line 16+). Thus, not only is it known that the device has passed an inspection or test, but the degree of quality of assurance is also indicated.

Independent claim 1 has been amended to recite, *inter alia*, the following:

a display device for displaying, for an individual semiconductor device that has been inspected, the general graded data transported from

the data processing section, thereby indicating the degree of quality assurance of the inspected individual semiconductor device.

It is submitted that claim 1, and thus its dependent claims 2 and 3, are patentably distinguishable from Cheong. Cheong does not disclose or suggest provision of a display of degree of quality assurance, or data indicative thereof, for each individual device. Cheong does not disclose determining general graded data as required by the claims. Withdrawal of the rejection is respectfully solicited.

Claims 4 through 6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheong in view of U.S. patent 6,456,729 (Moore) and U.S. patent 6,048,651 (Brunner). Moore is relied upon for disclosing a system and method of marking goods for authentication and tracking purposes. However, authentication in the context of the Moore disclosure is for anti-counterfeiting purposes, not for identifying graded data indicative of quality assurance inspection or testing.

Brunner has been relied upon for disclosing inspection of a photomask and creating a fresnel zone target (FZT) pattern on the mask. However, the pattern represents verification of the adjustment of an illumination system of a precision projector. A pupil diagram is projected onto an image plane, the pupil diagram then evaluated to determine the illumination system adjustment. There is no suggestion in Brunner, in either the portions identified in the Office Action or elsewhere, of identifying graded data indicative of quality assurance inspection or testing.

It is submitted that the teachings of Moore and Brunner, taken with Cheong, would not have led the artisan to the requirements of claim 1 as described above. Withdrawal of the rejection of claims 4 through 6, which are dependent from claim 1, therefore is respectfully solicited.

In summary, it is urged that the application as presently amended overcomes the rejections of record. Allowance of the application is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted, 

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APPENDIX

IN THE SPECIFICATION

Please rewrite the paragraph beginning at line 15 of page 12 as follows:

A third embodiment of the present invention will now be described in detail by reference to drawings. Fig. 5 is a block diagram showing the quality assurance automatic display system according to a third embodiment of the present invention. The quality assurance automatic display system according to the third embodiment differs from that described in connection with the first embodiment only in that the data processor is further equipped with an inspection data hold section for holding inspection data produced by individual pieces of inspection apparatus.

IN THE CLAIMS

Please amend claim 1 as follows:

1. (Amended) A quality assurance automatic display system comprising:

a data processor having an inspection item data hold section and a data processing section;

the inspection item data hold section holding inspection item graded data which have been graded by determination of reliability of a per-inspection-item for a substance to be inspected; and

the data processing section determining general graded data pertaining to the degree of quality assurance of the substance in accordance with an algorithm employed in the data processing section after having received the inspection item graded data from the inspection item data hold section; and

a display device for displaying, for an individual semiconductor device that has been inspected, the general graded data transported from the data processing section, thereby indicating the degree of quality assurance of the inspected individual semiconductor device.

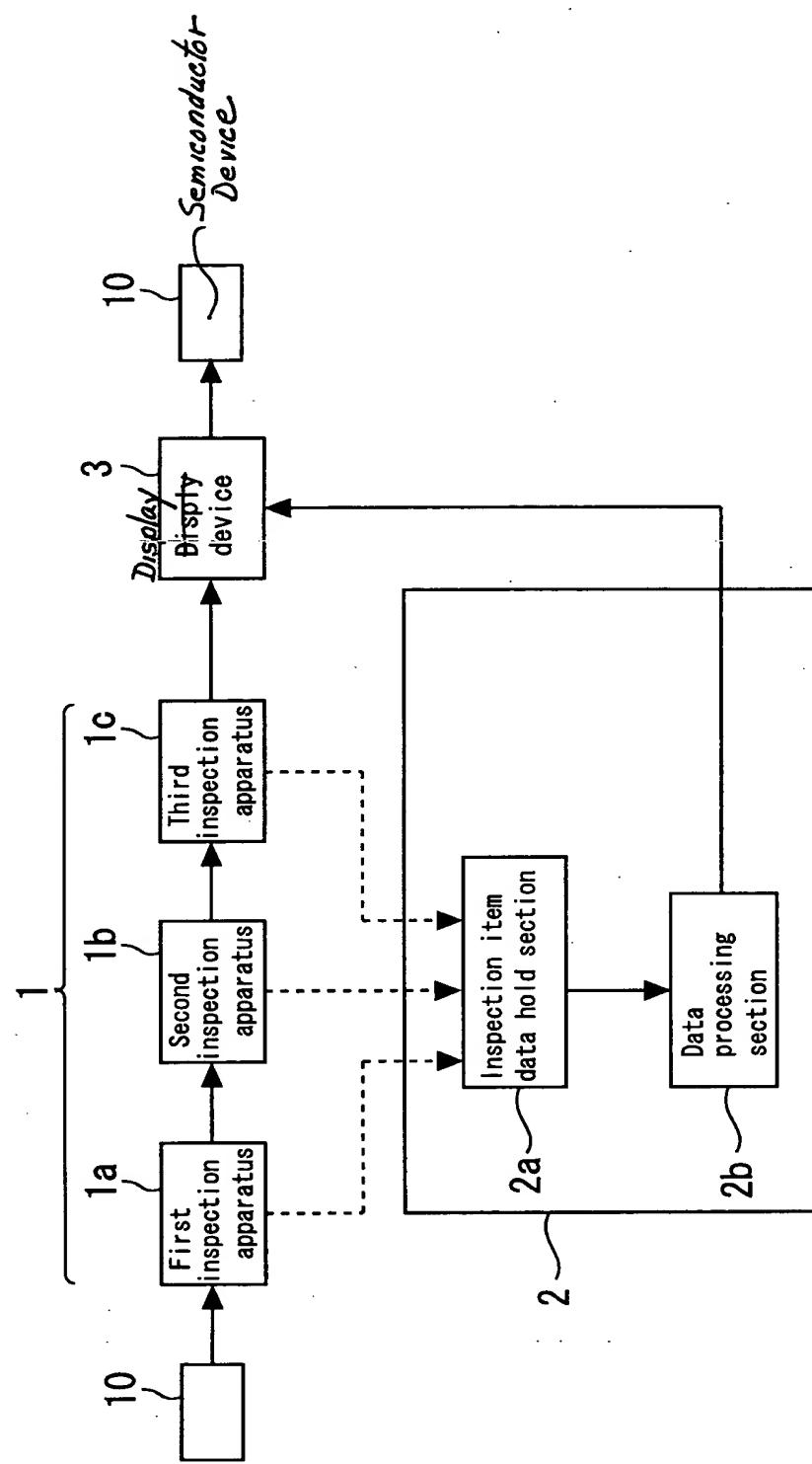
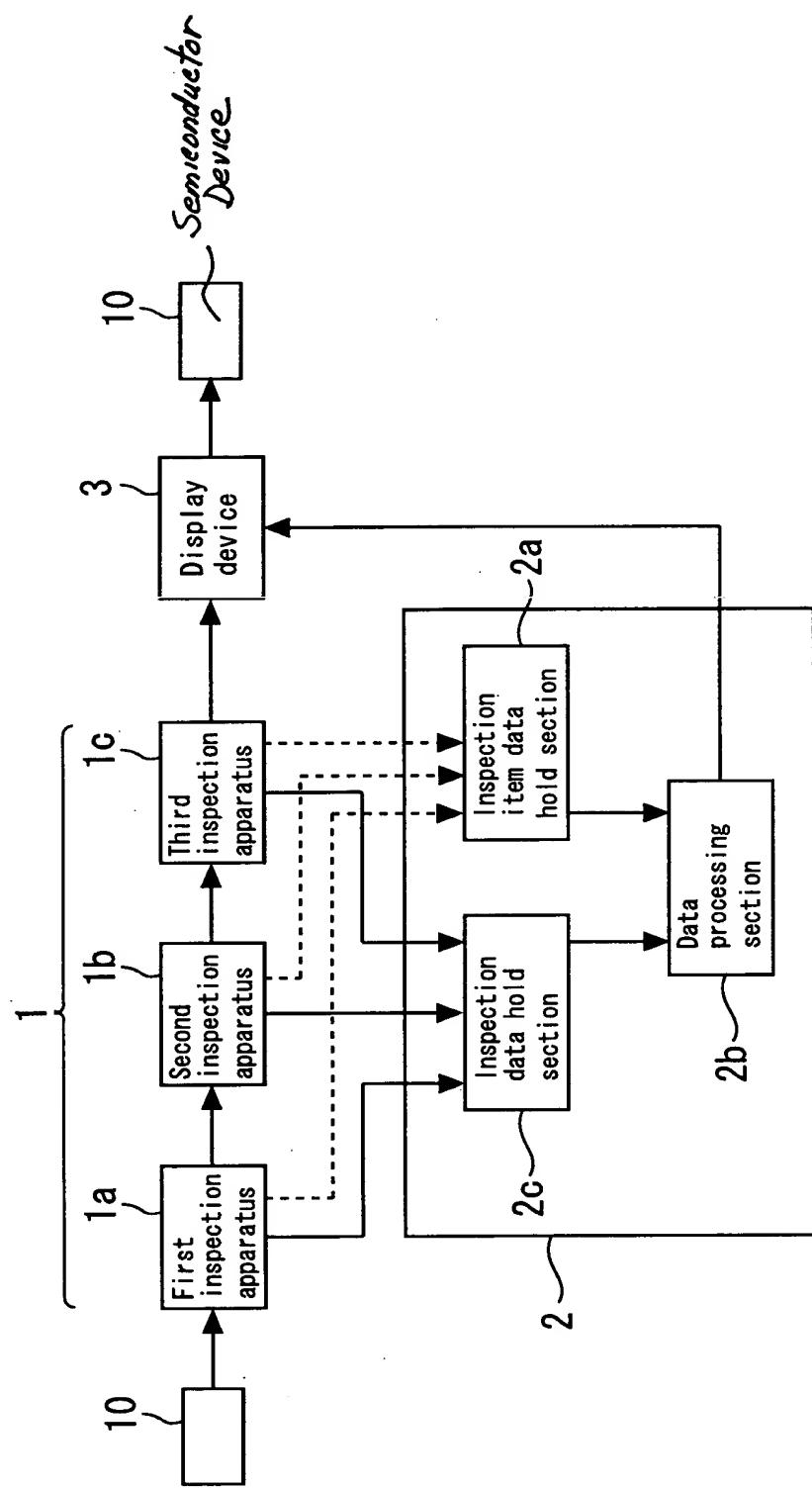


Fig. 1



F i g . 5